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Author Manuscript

Crime Delinq. Author manuscript; available in PMC 2014 August 01.

Published in final edited form as:

Crime Delinq. 2014 February 1; 60(1): 106–125. doi:10.1177/0011128711421652.

Females in the Juvenile Justice System: Who Are They and How Do They Fare?

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Abstract

Increasing numbers of female youth involved in the juvenile justice system highlight the need to examine this population. This study enumerates distinct profiles of risk and protection among juvenile court-involved females, examining young adult outcomes associated with these profiles. Administrative data on 700 participants were drawn from multiple service sectors in a Midwest metropolitan region. Latent class and Pearson chi-square analyses were used. Five unique classes were identified; these classes were associated with young adult outcomes. One class of impoverished African American females was most likely to experience problematic young adult outcomes but least likely to have received juvenile justice services. Findings highlight the heterogeneity in the female juvenile court population and discrepancies between service needs and service receipt.

Keywords

gender; juvenile justice; latent class analysis; profiles; outcomes

Introduction

Although arrests have decreased in recent years for both male and female youth, the rates of decrease are lower for females than for males (Federal Bureau of Investigation, n.d.). This has resulted in an increase in the proportion of juvenile court-involved youth who are female (Snyder & Sickmund, 2006). Concomitant with this heightened prevalence is scholarship about the strengths and needs of young court-involved females (e.g., Bright & Jonson-Reid, 2010; Carr, Hudson, Hanks, & Hunt, 2008; Cernkovich, Lanctôt, & Giordano, 2008; Gavazzi, Lim, Yarcheck, Bostic, & Scheer, 2008). This study uses a person-centered analytic approach to explore profiles of risk and service use among adolescent females involved in the juvenile justice system and examines associations between latent classes and later outcomes.

Several individual, family, and environmental risk factors are associated with delinquency and entry into the juvenile justice system among female youth. Those most commonly noted as precursors to delinquent behavior include maltreatment, poverty, and their intersection (Bright & Jonson-Reid, 2008); mental health problems (Calhoun, 2001; Wasserman,

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Declaration of Conflicting Interests The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

McReynolds, Ko, Katz, & Carpenter, 2005); issues with family and caregiver functioning (Galbavy, 2003; Holsinger & Holsinger, 2005; Leve & Chamberlain, 2004); residence in disadvantaged urban neighborhoods (Chauhan & Reppucci, 2009) or in foster or group care (Johansson & Kempf-Leonard, 2009); and substance abuse (Huizinga, Loeber, Thornberry, & Cothorn, 2000; Obeidallah-Davis, 2002). As with other juvenile and criminal justice populations, females of color are overrepresented (American Bar Association, 2001), despite evidence of similar rates of offending (Chauhan, Reppucci, Burnette, & Reiner, 2010). Adolescent motherhood is also associated with delinquency (Achenbach, Howell, McConaughy, & Stanger, 1998), although the time-order of these risk behaviors is not entirely clear from existing literature.

Substantial overlap has been noted in the characteristics and experiences that precede delinquent behavior for both male and female youth (e.g., Goldweber, Broidy, & Cauffman, 2009; Tracy, Kempf-Leonard, & Abramoske-James, 2009). The responses to these factors, however, differ according to gender. For example, although maltreatment and internalizing mental health problems such as depression are risk factors for both genders, they have a more pervasive impact on females (Cauffman, 2008; Zahn et al., 2010). Different mental health diagnoses are related to different rates of offending among boys and girls, with depression being a greater indicator for girls (Wareham & Boots, 2011). In addition, the mechanisms through which risk translates to offending can differ. For instance, although males frequently become involved in violent delinquency after exposure to peer and neighborhood crime (Farrington, 1998), violence among female youth can be a response to a broken or threatened relationship (Miller & White, 2003), and young women's offending may correspond to male partners' influence (Bright, Ward, & Negi, 2011). Running away may at times be a link between girls' family problems and later offending behavior (Park, Morash, & Stevens, 2010).

As discussed above, existing research has documented multiple risk factors for females' entry into the juvenile justice system. Yet, much less is known about their emerging adulthood following juvenile court involvement. Juvenile court-involved youth, as a whole, are believed to experience a more difficult transition to adulthood than others as a result of their problematic backgrounds and a lack of capacity building within the activities of the juvenile court itself (Chung, Little, & Steinberg, 2005). Some research on males has found significantly higher impairment in young adulthood in the areas of educational attainment, earnings, substance use, mental health, divorce, and a greater number of children fathered, which in early adult males is associated with a lack of financial and relationship stability (Moffitt, Caspi, Harrington, & Milne, 2002; Sampson & Laub, 1990).

These findings may be similar among females, but this has not been widely investigated. A review of later outcomes of delinquent female youth describes extreme variability in results across studies; studies included in the review indicated a 10% to 96% risk of adult arrest, a 0% to 90% risk of mental health problems, and up to a 90% rate of failing to complete high school (Pajer, 1998). A clearer picture of the presentations and outcomes of this population is therefore warranted. Information on young adult outcomes can provide a roadmap for improving services for adolescent youth (Daining & DePanfilis, 2007; Geenen & Powers, 2007; Jonson-Reid, Scott, McMillen, & Edmond, 2007). Given, also, that improved adult functioning is a central goal of children's services, the lack of more representative evidence on females' adult outcomes constitutes a gap in our ability to build knowledge and formulate policy.

A great deal more is now known about offending among females than was previously available in the scholarly literature; this literature, however, remains limited. Much of the existing research focuses on the small numbers of juvenile court-involved females housed in

locked residential facilities, whereas the majority of adjudicated delinquents (60% in 2005) remain in the community (Sickmund, 2009). Therefore, little is known about the constellations of risk and protective factors and juvenile court services provided in the community-dwelling female juvenile justice population. In addition, the relationship between child and adolescent female presentations and young adult outcomes is poorly understood. This gap hampers development and targeting of needed services to juvenile justice populations. The present study fills this gap in the literature by (a) identifying profiles of risk and protection in a pre-dominantly low-income, African American sample of juvenile court-involved female youth and (b) investigating the relationship between these profiles and later young adult outcomes. The following questions guide this study:

Research Question 1: How many distinct “classes” of juvenile courtinvolved females can be determined, and what proportion of female youth can be categorized within each class?

Research Question 2: What are the risk and protective factors associated with each class?

Research Question 3: Do African American and White youth tend to cluster in separate classes, or are they approximately evenly distributed in each class? and

Research Question 4: What is the relationship between class membership and young adult outcomes?

Method

Sample

These questions were answered by analyzing data from a longitudinal study of service paths of low-income children and/or children reported for maltreatment in a Midwest metropolitan region (for more information on sampling, data management, and variables in the larger study, Drake, Jonson-Reid, & Sapokaite, 2006). Administrative data collected include reports of child maltreatment and child welfare services, juvenile court records, adult arrest and corrections records, income maintenance use, birth and death records, mental health and substance-abuse services, and special education records. Data are limited to individuals and families known to public service sectors. The larger longitudinal study was approved by the Institutional Review Board, and in accordance with this study’s protocol, all data were de-identified prior to the creation of the data set for the present analyses.

Three groups of youth were included in the larger longitudinal study sample: Aid to Families With Dependent Children (AFDC)/maltreatment, AFDC only, and maltreatment only. For the AFDC/maltreatment group, children born between 1982 and 1994 and reported for abuse and neglect in 1993-1994 were linked using common child-level system identifiers to AFDC files. The AFDC-only group included a random sample of youth receiving AFDC *without* a report of child abuse or neglect who were matched to the maltreated/AFDC sample according to region and birth year. A maltreatment-only group included all remaining youth with the same birth years reported for abuse and neglect in 1993-1994 who did *not* have a history of AFDC.

The present study included youth from all three groups and was limited to females born between 1982 and 1987 who were petitioned for an offense in the juvenile justice system. These birth years were selected so that all participants would be 18 years prior to the end date of the present follow-up period, December 31, 2005. Due to small cell sizes, participants were excluded if they were identified as having an ethnic background other than African American or White ($n = 3$), if they gave birth prior to initial juvenile court petition ($n = 8$), and if their first contact with adult systems of care measured in this study predated

their first juvenile court petitions ($n = 2$). The number of female participants who met final inclusion criteria was 700.

The final study sample was primarily African American (72.9%). Approximately half came from census tracts with a median annual income of less than US\$25,000 (49.4%). Just over half were city dwellers, rather than suburban residents (57.4%), and had primary caregivers with less than a high school education (57.0%). In terms of offending profiles, 54.6% had an initial juvenile court petition of a delinquent versus a status or other offense, and 59.7% were recidivists, with multiple juvenile court petitions prior to age 18.

Variables

A total of 10 parameters were entered into a latent class analysis (LCA). These parameters were as follows: history of childhood maltreatment report, history of childhood income maintenance use (an indicator of poverty), ethnicity (African American or White), city residence (an indicator of urbanicity), type of offense alleged in the first juvenile court petition (delinquent vs. any other type), history of juvenile justice intervention (any service provided to the child or family following case disposition, ranging from community-based probation to long-term residential placement), adolescent parenthood, average census-tract income, caregiver age at participant's birth, and juvenile court recidivism (multiple offenses at separate times vs. one court appearance for an alleged offense). These variables were chosen because they have been found in previous empirical literature to be associated with juvenile court involvement among female youth, or they are indicators of the nature of the offense or the system's response. As LCA parameters must be binary, census-tract income and caregiver age were dichotomized at their approximate medians (US\$25,000 and 22 years, respectively) prior to entry in the model.

Three young adult outcomes were measured in this study. These outcomes were adult criminal justice system involvement (whether a study participant was arrested or entered corrections after turning 18 years), publicly funded adult mental health or substance-use (alcohol or other drug [AOD]) treatment, and adult income maintenance (Temporary Assistance to Needy Families [TANF]) use. These outcomes all reflect functional difficulty in transitioning to adulthood. Although mental illness and substance abuse can be considered separate phenomena, they frequently co-occur in this and other samples and are combined for conceptual as well as psychometric reasons. Young women could experience between zero and three of the outcomes. Exhaustive, mutually exclusive outcome categories were constructed, as depicted in Table 1.

Analysis

A LCA was conducted with *Mplus* version 4.1, using the TYPE = MIXTURE command (Muthén & Muthén, 1998-2010). This analysis was intended to create profiles, or classes, from the data. To assess the relationship between latent classes and young adult outcomes, a Pearson chi-square test was conducted, using SAS 9.1 software.

LCA is one of a number of "person-centered" analytic techniques, allowing for the creation of various groups of individuals within the data. This stands in contrast to "variable-centered" analyses, which assess the potential relationships among variables versus among people (Bogat, Levendosky, & von Eye, 2005). LCA is a type of mixture modeling that allows for the representation of a latent variable—group membership—in which individuals are categorized in homogeneous clusters (Muthén & Muthén, 1998-2010). LCA calculates latent class probabilities, which describe the number of classes and the proportion of the sample within each class, and conditional probabilities, which indicate the probability that any given participant will appear in a particular class (McCutcheon, 1987). One class at a

time was added into the LCA model until model fit statistics indicated that the addition of more classes did not improve the model (Ferdinand, de Nijs, van Lier, & Verhulst, 2005; McCutcheon, 1987; Nylund, Asparouhov, & Muthén, 2007). Table 2 displays fit statistics for each of the six models tested.

Results

LCA

Although a five-class solution had a slightly higher value on the Bayesian Information Criterion (BIC) than the four-class solution, it showed improved model fit in terms of the Akaike Information Criterion (AIC) and the sample size-adjusted BIC. The entropy values were virtually unchanged between the two solutions. Simulations showing the sample size-adjusted BIC to be the most accurate of the model fit measures (Henson, Reise, & Kim, 2007) bolster the utility of the five-class over the four-class solution. As Table 2 shows, the six-class solution demonstrated improved model fit on only one of the four measures, the AIC. The five-class solution was therefore retained.

Each class was distinguishable from the others based on the prevalence of the 10 parameters (variables) entered into the analysis. The classes were named in terms of sample size—Class 1 having the largest number of participants and Class 5 having the smallest—rather than in terms of their distinguishable features. This naming strategy reflected the complex makeup of classes, which are described in more detail below. The largest class contained 265 members, the second largest class contained 237, and the third, fourth, and fifth classes consisted of 75, 66, and 57 individuals, respectively. Figure 1 depicts the conditional item probabilities or proportion of each class falling into a particular category (McCutcheon, 1987), for each of the 10 parameters within each class, as determined by the LCA. Each class is represented as a line on the graph.

Latent class probabilities are calculated in LCA to precisely state the proportion of the sample within each class (McCutcheon, 1987). Latent class probabilities were 0.38 for Class 1, 0.34 for Class 2, 0.11 for Class 3, 0.09 for Class 4, and 0.08 for Class 5. Conditional probabilities, or posterior probabilities, provide an average estimate of the probability that a particular participant will appear in a latent class, indicating more precisely how sensitive and specific the maximum likelihood procedure is with respect to individual participants (McCutcheon, 1987). Participants' probabilities of being members of their actual classes were between 97% and 100% for Classes 1, 2, 3, and 5. In Class 4, participants had an 81% probability of correct classification.

Class 1, with 265 members, consisted primarily of individuals who experienced both reported maltreatment and income maintenance during childhood. Most members of this class were African American (.89, as a proportion) and resided in the city at the time of the 1990 census (.92). None lived in census tracts with incomes at or above the median for the sample of 700. More than half were petitioned for delinquency in their first juvenile court appearance (.59), most had multiple appearances in the court (.65), and more than half (.54) were born to caregivers at or above the median age. About a third (.34) became mothers prior to age 19.

Class 2 consisted of 237 members. In many respects, it was similar to Class 1. Most of the individuals in this class experienced both a maltreatment report and a spell of income maintenance in childhood (.80), and the proportions of delinquent petitions (.53), juvenile court recidivism (.64), juvenile court intervention (.10), older caregivers (.50), and adolescent parenthood (.31) were very close to those in the first class. The proportion of African Americans in this class was lower (.61), and the number of city residents (.29) was

approximately one third that of the first class. The largest difference was in the median census-tract incomes of the two classes. All members of Class 2 lived in census tracts at or above the median for this sample in 1990; this was true for no members of Class 1.

Class 3 was considerably smaller than the previous two, with 75 members. In Class 3, no one was reported for maltreatment in childhood; the entire class received income maintenance support prior to age 18. This group was almost entirely African American (.97), and more than half (.55) lived in the city. None resided in higher income census tracts. Delinquent petitions were more prevalent in this class than in either of the previous two (.68), but recidivism was slightly lower (.55). This class was least likely of any to receive an intervention through the juvenile court system; only 3% of the class was served in this way. This class was similar to the previous two in terms of caregiver age (.55 at or above the median) and adolescent parenthood (.32).

Class 4 consisted of 66 members, all of whom were reported for maltreatment in childhood. Very few (.08 as a proportion of the class) received income maintenance in childhood. Most were White (.89), and all were suburban residents living in census tracts with incomes at or above the median for this sample. About half (.53) were petitioned for delinquency, and just under half (.48) appeared in juvenile court on multiple occasions. This class was most likely to receive a juvenile court intervention (.21). Nearly all (.94) were born to older caregivers, and adolescent parenthood was less frequent in this class than in all others (.11). About a tenth of this class became mothers during adolescence, compared with between a fourth and a third of the other classes.

The smallest class was Class 5, with 57 members. All of this class experienced income maintenance use during childhood, and none were reported for maltreatment. Most were African American (.86) and suburban residents (.26), and the majority (.89) lived in census tracts with incomes at or above the median for this sample. This class had the lowest recidivism rate (.37, compared with .48 and higher in other classes). Like Class 4, this group was more likely than the first three classes to receive intervention through the juvenile court (.16).

Latent Classes and Young Adult Outcomes

Pearson chi-square analyses were conducted to assess the association between class membership and the young adult outcome categories listed in Table 1. The chi-square value of 27.59 ($df = 12$, $p < .01$) indicates an association between classes and later outcomes. Class 3 had the highest representation among those who became involved in the adult criminal justice system (14.67% of this class) and also among those who received adult income maintenance support (26.67%). Class 2 had the highest representation in publicly funded adult mental health or substance-use services (10.55%). Classes 4 and 5 were least likely to experience any of the negative young adult outcomes. These relationships are described visually in Figure 2.

Discussion

The results of the LCA and follow-up analysis indicate that females with juvenile court involvement have distinct profiles and that young adult outcomes vary by these profiles. In other words, the profiles have practical import in understanding ongoing risk and identifying unmet service needs. Risk factors and juvenile court experiences cluster into five distinct classes among this sample of females in one Midwest metropolitan region. A chisquare analysis further determined that adult mental health, criminal justice, and TANF receipt outcomes varied by class membership.

Distinct Classes

Class 1, with the largest membership, can be described as a high-need group living in poor, urban areas with high rates of child maltreatment, income maintenance use, delinquency, recidivism, and adolescent parenthood. This class had the second highest rate of problematic adult outcomes, particularly receipt of TANF. Income maintenance receipt indicates that these young women are parenting and most likely doing so without a permanent partner. Their childhood history combined with environmental risks and current parenting in poverty may also indicate higher risk of becoming perpetrators of maltreatment (Berger, 2004).

Class 2 can be described as a moderate-need group likely living in nonurban environments with higher median incomes. Class 2 shows somewhat lower rates of maltreatment reports and income maintenance use than Class 1. Although everyone in the sample experienced at least one of these conditions in childhood, the participants in Class 2 are slightly less likely than the participants in Class 1 to experience both. Fewer members of this class live in the city, and all live in neighborhoods with higher median incomes. Although Class 2 also experiences multiple problems, they do so at a somewhat lower rate than females in Class 1, and they may have some environmental protective factors in terms of community and neighborhood that are lacking for Class 1. Living in poorer areas, members of Class 1 would be more likely to experience structural disadvantage and exposure to violence in the community (Lauritsen & White, 2001), although neighborhood effects documented in the literature tend to be greater for males than for females (Kroneman, Loeber, & Hipwell, 2004). Differences between Classes 1 and 2 may also reflect family strengths and capacity, driving their residence in more resource-rich neighborhoods. Interestingly, Class 2 is most likely to use publicly funded mental health or substance-use services in adulthood. This could reflect an intersection between need for and availability of resources in the environment, as higher socioeconomic status is associated with increased availability and use of adequate mental health services (Wang et al., 2005).

Class 3 could be termed the “African American poor” class. They are distinct from the prior two classes in the absence of child maltreatment reports, and like Class 1, they come from poorer neighborhoods. This class is more likely than the others to experience two of the young adult outcome categories: criminal justice system involvement and income maintenance use. Despite this evidence of risk, however, only 3% of this class has been provided any type of service through the juvenile court system. Although all members of this class are, by definition, juvenile court involved, this is the lowest rate of actual service receipt in the sample. Due to the high incidence of risk factors and negative outcomes, services targeted to females with these problems may need to be multisystemic in nature.

Class 4 is distinct from the others in that it is mostly comprised of White youth and fewer than 10% have experienced a spell of income maintenance in childhood. Furthermore, every member had a maltreatment report. All are suburban residents from better-off neighborhoods. Juvenile court recidivism and adolescent parenthood are lowest in this class, but rate of service receipt is higher. This class is least likely to experience a negative young adult outcome; 80% do not, in this study period. For individuals who resemble this class, services designed to support and maintain existing strengths may be most appropriate.

The low incidence of environmental, personal, and family needs is apparent in Class 4. Although a large proportion of juvenile court-involved females experience multiple problems (Classes 1, 2, and 3 in particular), this is not always the case; for Class 4 youth, it is arguable that offending is either an aberration in their usually functional behavior or that their intrapsychic (mental health or other individual level) needs outweigh environmental issues. For these youth, systems-level services may be less effective than individual-based treatment modalities such as cognitive behavioral treatment.

Class 5 is similar to Class 3 in that maltreatment reports are absent, and all members received income maintenance support in childhood. Most members of this class are African American. Most, however, live outside the city in less poor neighborhoods. This class has the highest rate of delinquent petitions (79%) but the lowest rate of recidivism (37%) of any class. Again, environmental protective factors may be playing a role in this relative success, as may family-level resources. This class has the second highest rate of juvenile justice intervention (16%). Class 5 may be showing the benefits of combining appropriate services with neighborhood and community resources.

Class Membership and Race

In this sample, African American and White females tend to cluster in different classes. This finding is in accordance with prior research that risk and protective factors differentially impact African American and White females (Holsinger & Holsinger, 2005; Jonson-Reid, 2002; Vaughn, Wallace, Davis, Fernandes, & Howard, 2008). African Americans constitute approximately 75% of the entire sample. They are overrepresented in Classes 1, 3, and 5, and underrepresented in Class 4, which is predominantly White. Due to persistent and multifaceted disadvantage, it is unsurprising that African Americans appear in the classes with higher numbers and proportions of diverse risk factors. It is worth noting, however, that Class 5 appears to confer some environmental advantages for African American females who live in suburban rather than inner city areas. These advantages may relate to differences in neighborhood crime and poverty and may also reflect differences in opportunities for educational, vocational, and/or extracurricular activities.

Implications

The clustering of individual-level cases within classes of the unobserved latent variable, group membership, has practical implications for policy and practice with juvenile court-involved females. This finding underscores the notion that the population is not monolithic but has diverse presentations and needs. Although gender-specific services are promoted as appropriate for juvenile court-involved females as designed to meet their particular needs (Iowa Commission on the Status of Women, 1999), these services must be flexible enough to accommodate multiple groups. This is supported by the fact that the classes are predictive of different types of untoward young adult outcomes. The first three classes, for example, have significant proportions of females on TANF. Although maltreatment is often listed as a prime risk factor for negative outcomes, individuals in Class 3 without this history appeared to be functioning more poorly overall than those in Classes 1 and 2.

Individuals in this sample who do receive juvenile justice interventions are not necessarily those most at risk. The clustering of multiple risk factors in Classes 1, 2, and 3, coupled with the substantially increased prevalence of juvenile court intervention for Classes 4 and 5, suggests that youth who most need juvenile court services do not receive them. This finding has implications for policy related to assessing risk and implementing services equitably, given that the individuals in Class 3 who are most likely to experience a young adult outcome are least likely to have received juvenile court services. The process of assessing risk among female youth may, in and of itself, require careful consideration of gender-specific needs (Brumbaugh, Walters, & Winterfield, 2010).

Limitations and Future Research

Because of the design of the study and use of administrative data, some potentially important variables such as attachment to parents, support network response to maltreatment, and self-esteem, are unavailable. Females who are not known to the child welfare or income maintenance systems in childhood are not included in this study, and their

profiles and young adult outcomes are therefore unknown. Furthermore, the analysis of the relationship between profiles and subsequent outcomes is preliminary. Future investigations can build on the findings of this study by initiating prospective longitudinal designs with a broad cross-section of juvenile court-involved females and using more sophisticated trajectory analyses, such as growth mixture models, to measure their diverse characteristics and experiences over time.

Such person-centered analyses have been criticized, however, for reifying classes or asserting that latent profiles and trajectories are equivalent to actual, generalizable groups of individuals (Nagin & Tremblay, 2005). It is therefore important not to overstate findings or imagine that the latent construct, group membership, is entirely represented in this study. An additional limitation is related to possible overestimation of the relative strength of indicators and class prevalence in LCA, given the associations inherent among the parameters reflecting social and demographic risk factors. The local independence assumption of LCA asserts that any such correlation is a result of latent class membership alone (Pickles et al., 1995). However, other possible common causes are untested in the present research. Regardless, the results are suggestive that juvenile court-involved females are a heterogeneous group, and further research may describe the population more thoroughly.

A final limitation is that this sample is drawn from one metropolitan region. It is hoped that this research will be replicated in other metropolitan and rural areas to develop a better understanding of the interplay of gender, poverty, maltreatment, juvenile court involvement, and young adult outcomes.

Conclusions

This classification highlights the heterogeneity in the female juvenile court population and discrepancies between service needs and service delivery for female youth. The youth with higher numbers of individual, family, and neighborhood risk factors were less likely to receive services through the juvenile court system than those with fewer risk factors, and were also more likely to recidivate as children, as well as to experience problematic young adult outcomes. From a targeted prevention or life-course development standpoint, this is troubling. It suggests that services are not targeting those females with the greatest need. Policy efforts to more appropriately target services may wish to emphasize gender-based assessment (Brumbaugh et al., 2010).

Gender-specific services have been recommended to meet the specific needs of females in the juvenile justice system (Iowa Commission on the Status of Women, 1999). This approach is responsive to the common risk factors female youth experience and to the environment in which they live. Studies evaluating gender-specific programming are few in number and methodologically limited, but it appears that they may be effective on some outcomes (Zahn, Day, Mihalic, & Tichavsky, 2009). The findings from this study suggest that such strategies, however, must take care to maintain sufficient flexibility to accommodate the multiple profiles likely populating the juvenile justice system.

Much work remains to be done to more completely understand the experiences, presentations, and outcomes of female juvenile court populations. LCA is one method to investigate profiles, and future research can extend these findings through prospective, longitudinal designs. The impact of policies and services designed to improve the lives of girls and young women is largely undetermined; additional work can address these gaps in knowledge.

Acknowledgments

Funding Data for the analyses are drawn from a study of cross-sector service paths and outcomes funded by Grant No. CE001190 from the Centers for Disease Control and Prevention and Grant No. MH6173302 from the National Institute of Mental Health. Points of view and opinions expressed in this article are those of the authors and do not necessarily represent the official position or policies of the funding agencies.

Bios

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References

- Achenbach TM, Howell CT, McConaughy SH, Stanger C. Six-year predictors of problems in a national sample: IV. Young adult signs of disturbance. *Journal of the American Academy of Child & Adolescent Psychiatry*. 1998; 37:718–727. [PubMed: 9666627]
- American Bar Association. Justice by gender: The lack of appropriate prevention, diversion and treatment alternatives for girls in the juvenile justice system. May. 2001 Retrieved from [http://scholarship.law.wm.edu/cgi/viewcontent.cgi?article=1182&context=wmjowl&sei-redir=1#search=american bar association justice by gender](http://scholarship.law.wm.edu/cgi/viewcontent.cgi?article=1182&context=wmjowl&sei-redir=1#search=american%20bar%20association%20justice%20by%20gender)
- Berger LM. Income, family structure, and child maltreatment risk. *Children and Youth Services Review*. 2004; 26:725–748.
- Bogat GA, Levendosky AA, von Eye A. The future of research on intimate partner violence: Person-oriented and variable-oriented perspectives. *American Journal of Community Psychology*. 2005; 36:49–70. [PubMed: 16134044]
- Bright CL, Jonson-Reid M. Onset of juvenile court involvement: Exploring gender-specific associations with maltreatment and poverty. *Children and Youth Services Review*. 2008; 30:914–927. [PubMed: 19649138]
- Bright CL, Jonson-Reid M. Young adult outcomes of juvenile court involved girls. *Journal of Social Service Research*. 2010; 36(2):94–106. [PubMed: 23430819]
- Bright CL, Ward SK, Negi NJ. The chain has to be broken: A qualitative investigation of the experiences of young women following juvenile court involvement. *Feminist Criminology*. 2011; 6(1):32–53.
- Brumbaugh, S.; Walters, JLH.; Winterfield, LA. Suitability of assessment instruments for delinquent girls. Girls study group: Understanding and responding to girls' delinquency. Apr. 2010 Retrieved from http://girlsstudygroup.rti.org/docs/GSG_Assessment_Instruments_Bulletin.pdf
- Calhoun GB. Differences between male and female juvenile offenders as measured by the BASC. *Journal of Offender Rehabilitation*. 2001; 33:87–96.

- Carr NT, Hudson K, Hanks RS, Hunt AN. Gender effects along the juvenile justice system: Evidence of a gendered organization. *Feminist Criminology*. 2008; 3:25–43.
- Cauffman E. Understanding the female offender. *Future of Children*. 2008; 18:119–142. [PubMed: 21338000]
- Cernkovich SA, Lanctôt N, Giordano PC. Predicting adolescent and adult antisocial behavior among adjudicated delinquent females. *Crime & Delinquency*. 2008; 54:3–33.
- Chauhan P, Reppucci ND. The impact of neighborhood disadvantage and exposure to violence on self-report of antisocial behavior among girls in the juvenile justice system. *Journal of Youth and Adolescence*. 2009; 38:401–416. [PubMed: 19636753]
- Chauhan P, Reppucci ND, Burnette M, Reiner S. Race, neighborhood disadvantage, and antisocial behavior among female juvenile offenders. *Journal of Community Psychology*. 2010; 38:532–540.
- Chung, HL.; Little, M.; Steinberg, L. The transition to adulthood for adolescents in the juvenile justice system: A developmental perspective. In: Osgood, DW.; Foster, EM.; Flanagan, C.; Ruth, GR., editors. *On your own without a net: The transition to adulthood for vulnerable populations*. University of Chicago Press; Chicago, IL: 2005. p. 68-91.
- Daining C, DePanfilis D. Resilience of youth in transition from out-of-home care to adulthood. *Children and Youth Services Review*. 2007; 29:1158–1178.
- Drake B, Jonson-Reid M, Sapokaite L. Reporting of child maltreatment: Does participation in other public sector services moderate the likelihood of a second maltreatment report? *Child Abuse and Neglect*. 2006; 30(11):1201–1226. [PubMed: 17112587]
- Farrington DP. Predictors, causes, and correlates of male youth violence. *Crime and Justice*. 1998; 24:421–475.
- Federal Bureau of Investigation. *Crime in the United States 2008*. (n.d.) Retrieved from <http://www.fbi.gov/ucr/cius2008/index.html>
- Ferdinand RF, de Nijs PFA, van Lier P, Verhulst FC. Latent class analysis of anxiety and depressive symptoms in referred adolescents. *Journal of Affective Disorders*. 2005; 88:299–306. [PubMed: 16182373]
- Galbavy RJ. Juvenile delinquency: Peer influences, gender differences and prevention. *Journal of Prevention & Intervention in the Community*. 2003; 25:65–78.
- Gavazzi SM, Lim J, Yarcheck CM, Bostic JM, Scheer SD. The impact of gender and family processes on mental health and substance use issues in a sample of court-involved female and male adolescents. *Journal of Youth and Adolescence*. 2008; 37:1071–1084.
- Geenen S, Powers LE. “Tomorrow is another problem”: The experiences of youth in foster care during their transition into adulthood. *Children and Youth Services Review*. 2007; 29:1085–1101.
- Goldweber, A.; Broidy, LM.; Cauffman, E. Interdisciplinary perspectives on persistent female offending: A review of theory and research. In: Savage, J., editor. *The development of persistent criminality*. Oxford University Press; New York, NY: 2009. p. 205-230.
- Henson JM, Reise SP, Kim KH. Detecting mixtures from structural model differences using latent variable mixture modeling: A comparison of relative model fit statistics. *Structural Equation Modeling*. 2007; 14:202–226.
- Holsinger K, Holsinger AM. Differential pathways to violence and self-injurious behavior: African American and White girls in the juvenile justice system. *Journal of Research in Crime & Delinquency*. 2005; 42:211–242.
- Huizinga, D.; Loeber, R.; Thornberry, TP.; Cothorn, L. Co-occurrence of delinquency and other problem behaviors. *Juvenile Justice Bulletin*. Nov. 2000 Retrieved from <https://www.ncjrs.gov/pdffiles1/ojjdp/182211.pdf>
- Iowa Commission on the Status of Women. *Providing gender-specific services for adolescent female offenders: Guidelines and resources*. Iowa Department of Human Rights; Des Moines: 1999.
- Johansson P, Kempf-Leonard K. A gender-specific pathway to serious, violent, and chronic offending? Exploring Howell’s risk factors for serious delinquency. *Crime & Delinquency*. 2009; 55:216–240.
- Jonson-Reid M. Exploring the relationship between child welfare intervention and juvenile corrections involvement. *American Journal of Orthopsychiatry*. 2002; 72:559–576. [PubMed: 15792041]

- Jonson-Reid M, Scott LD Jr, McMillen JC, Edmond T. Dating violence among emancipating youth. *Children and Youth Services Review*. 2007; 29:557–571.
- Kroneman L, Loeber R, Hipwell AE. Is neighborhood context differently related to externalizing problems and delinquency for girls compared with boys? *Clinical Child and Family Psychology Review*. 2004; 7:109–122. [PubMed: 15255175]
- Lauritsen JL, White NA. Putting violence in its place: The influence of race, ethnicity, gender, and place on the risk for violence. *Criminology & Public Policy*. 2001; 1:37–59.
- Leve LD, Chamberlain P. Female juvenile offenders: Defining an earlyonset pathway for delinquency. *Journal of Child and Family Studies*. 2004; 13:439–452.
- McCutcheon, AL. Latent class analysis. SAGE; Thousand Oaks, CA: 1987.
- Miller J, White NA. Gender and adolescent relationship violence. *Criminology*. 2003; 41:1207–1248.
- Moffitt TE, Caspi A, Harrington H, Milne BJ. Males on the life-course persistent and adolescence-limited antisocial pathways: Follow-up at age 26 years. *Development and Psychopathology*. 2002; 14:179–207. [PubMed: 11893092]
- Muthén, LK.; Muthén, BO. Mplus user's guide. 6th ed. Author; Los Angeles, CA: 1998-2010. Available from <http://www.statmodel.com>
- Nagin DS, Tremblay R. Developmental trajectory groups: Fact or a useful statistical fiction? *Criminology*. 2005; 43:873–903.
- Nylund KL, Asparouhov T, Muthén BO. Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling*. 2007; 14:535–569.
- Obeidallah-Davis, D. Data from the Project on Human Development in Chicago Neighborhoods (PHDCN): A prospective study of serious delinquency in adolescent girls. Apr. 2002 Retrieved from <https://www.ncjrs.gov/pdffiles1/nij/grants/197521.pdf>
- Pajer KA. What happens to “bad” girls? A review of adult outcomes of anti-social adolescent girls. *American Journal of Psychiatry*. 1998; 155:862–870. [PubMed: 9659848]
- Park S, Morash M, Stevens T. Gender differences in predictors of assaultive behavior in late adolescence. *Youth Violence and Juvenile Justice*. 2010; 8:314–331.
- Pickles A, Bolton P, Macdonald H, Bailey A, Le Couteur A, Sim CH, Rutter M. Latent-class analysis of recurrence risks for complex phenotypes with selection and measurement error: A twin and family history study of autism. *American Journal of Human Genetics*. 1995; 57:717–726. [PubMed: 7668301]
- Sampson RL, Laub JH. Crime and deviance over the life course: The salience of adult social bonds. *American Sociological Review*. 1990; 55:609–627.
- Sickmund, M. Delinquency cases in juvenile court, 2005. Jun. 2009 Retrieved from <https://www.ncjrs.gov/pdffiles1/ojjdp/224538.pdf>
- Snyder, HN.; Sickmund, M. Juvenile offenders and victims: 2006 National report. Mar. 2006 Retrieved from <http://www.ojjdp.gov/ojstatbb/nr2006/>
- Tracy PE, Kempf-Leonard K, Abramoske-James S. Gender differences in delinquency and juvenile justice processing: Evidence from national data. *Crime & Delinquency*. 2009; 55:171–215.
- Vaughn MG, Wallace JM, Davis LE, Fernandes GT, Howard M. Variations in mental health problems, substance use, and delinquency between African American and Caucasian juvenile offenders: Implications for reentry services. *International Journal of Offender Therapy and Comparative Criminology*. 2008; 52:311–329. [PubMed: 17717333]
- Wang PS, Lane M, Olfson M, Pincus HA, Wells KB, Kessler RC. Twelve-month use of mental health services in the United States: Results from the National Comorbidity Survey Replication. *Archives of General Psychiatry*. 2005; 62:629–640. [PubMed: 15939840]
- Wareham J, Boots DP. Gender differences in mental health problems and violence among Chicago youth. *Youth Violence and Juvenile Justice*. 2011; 9:3–22.
- Wasserman GA, McReynolds LS, Ko SJ, Katz LM, Carpenter JR. Gender differences in psychiatric disorders at juvenile probation intake. *American Journal of Public Health*. 2005; 95:131–137. [PubMed: 15623873]

- Zahn, MA.; Agnew, R.; Fishbein, D.; Miller, S.; Winn, D.; Dakoff, G.; Chesney-Lind, M. Causes and correlates of girls' delinquency. Girls study group: Understanding and responding to girls' delinquency. Apr. 2010 Retrieved from http://girlsstudygroup.rti.org/docs/GSG_Causes_and_Correlates_Bulletin.pdf
- Zahn MA, Day JC, Mihalic SF, Tichavsky L. Determining what works for girls in the juvenile justice system: A summary of evaluation evidence. *Crime & Delinquency*. 2009; 55:266–293.

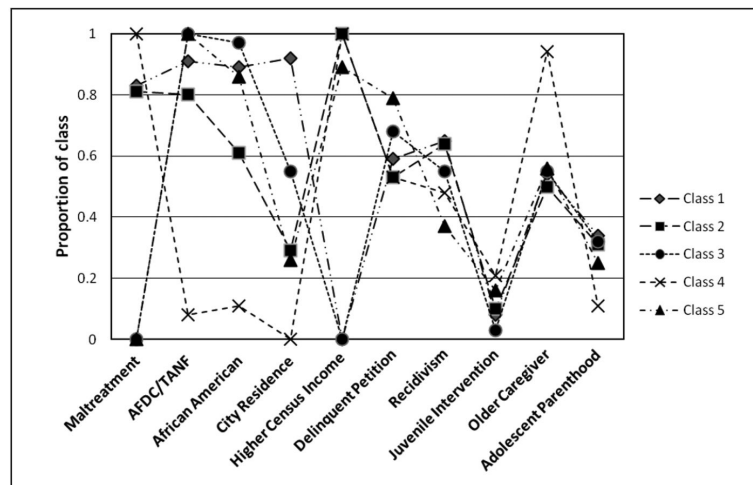


Figure 1.

Visual description of latent classes

Note: AFDC = Aid to Families With Dependent Children; TANF = Temporary Assistance to Needy Families. Caregiver age at participant's birth was dichotomized at the approximate median (22). Because of the number of caregivers who were exactly 22 at the birth of the participant, the proportion of older caregivers in the total sample was greater than .50.

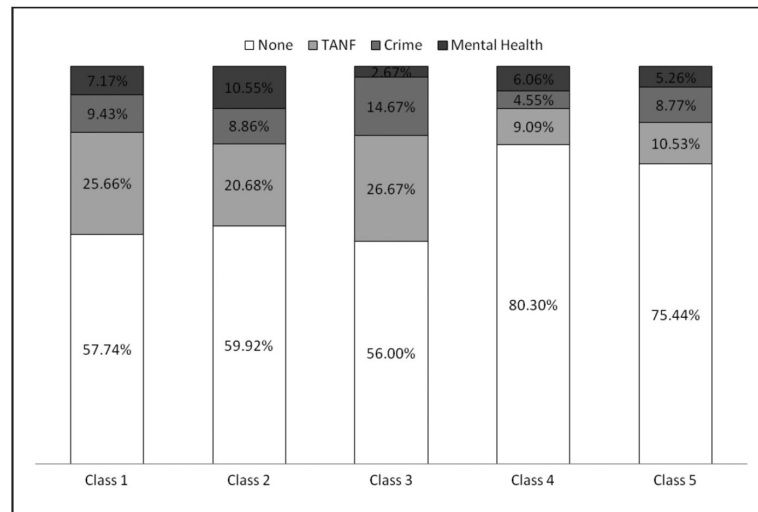


Figure 2.
Association between young adult outcomes and class membership Note: TANF = Temporary Assistance to Needy Families.

Table 1Frequencies and Percentages of Young Adult Outcomes ($N = 700$)

	Frequency	%
Outcome 1—Adult criminal system involvement		
Arrest/corrections entry alone	37	5.3
Arrest/corrections + IM	21	3.0
Arrest/corrections + MH	3	0.4
Arrest/corrections + IM + MH	4	0.6
	65	9.3
Outcome 2—Publicly funded adult mental health or substance-abuse service use		
MH/substance abuse alone	27	3.9
MH + IM	26	3.7
	53	7.6
Outcome 3—Adult income maintenance receipt alone		
IM alone	149	21.3
None during the study period	433	61.9

Note: IM = income maintenance; MH = mental health.

Table 2Latent Class Analysis Model Fit Statistics ($N = 700$)

Number of classes	AIC	BIC	Sample size–adjusted BIC	Entropy
One	8412.366	8457.762	8426.011	NA
Two	7897.712	7993.043	7926.365	0.958
Three	7568.546	7713.812	7612.207	0.951
Four	7484.647	7679.849	7543.317	0.958
Five	7445.596	7690.734	7519.275	0.954
Six	7439.879	7734.952	7528.566	0.861

Note: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion